

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in this application:

LISTING OF CLAIMS

1. (Currently Amended) Apparatus for the removal of lens tissue, said apparatus comprising:
 - a first handpiece including a laser emitting probe sized for insertion into a lens capsule and radiating a lens therein, said laser emitting probe including a lumen for introducing an irrigation fluid into said lens capsule; and
 - a second handpiece including a vibrated needle for insertion into said lens capsule and emulsifying lens tissue, said vibrated needle including a lumen therethrough for aspiration of emulsified lens tissue and irrigation fluid;
 - a power source for providing pulsed electrical power to the second handpiece;
 - an input for enabling a surgeon to select an amplitude of the electrical pulses;
 - a control console, interconnected with both the first handpiece and second ~~handpress-handpiece~~ handpiece for controlling simultaneous and sequential operation of the first handpiece and second ~~handpress-handpiece~~ handpiece and in response to the selected pulse amplitude for controlling a pulse duty cycle of power supplied to the second handpiece, an off duty cycle being controlled to ensure heat dissipation before a subsequent pulse is activated.
2. (Original) The apparatus according to claim 1 wherein said control console provides a pulse repetition rate of between about 25 and 2000 pulses per second to said second handpiece.
3. (Original) The apparatus according to claim 1 wherein said input enables a linear selection of pulse amplitude.

4. (Original) The apparatus according to claim 1 wherein said second handpiece includes a transducer for driving said vibrated needle at ultrasonic frequencies.

5. (Original) The apparatus according to claim 1 wherein said laser emitting probe comprises fiber optics.

6. (Original) The apparatus according to claim 5 wherein the laser emitting probe lumen is disposed through said fiber optics.

7. (Original) A method for removing lens tissue from a lens capsule, said method comprising:

inserting a laser emitting probe having an irrigation lumen into said lens capsule;

inserting a vibratable needle having an aspiration lumen into said lens capsule;

introducing irrigation fluid into said lens capsule through said irrigation lumen;

softening said lens tissue by exposure to laser energy from said laser emitting probe;

vibrating the needle to emulsify softened lens tissue;

providing a power source for providing pulsing electrical power for vibrating the needle;

providing an input for enabling a surgeon to select an amplitude of the selected pulses;

controlling operation of the laser emitting probe and vibratable needle simultaneously and sequentially in order to effect emulsification of the lens tissue;

controlling a pulse duty cycle of said power source in response to the selected pulse amplitude, an off duty cycle being controlled to insure heat dissipation before a subsequent pulse is activated; and

aspirating emulsified lens tissue and irrigation fluid from said lens capsule through said aspiration lumen.

8. (Original) A method for removing lens tissue from a lens capsule, said method comprising:

inserting a laser emitting probe having an irrigation lumen into said lens capsule;

inserting a vibratable needle having an aspiration lumen into said lens capsule;

introducing irrigation fluid into said lens capsule through said irrigation lumen;

fracturing said lens tissue by exposure to laser energy from said laser emitting probe;

providing a power source for pulsing electrical power for vibrating the needle;

providing an input for enabling a surgeon to select an amplitude of the electrical pulses;

vibrating the needle to emulsify fractured lens tissue;

controlling the fracturing of said lens tissue and emulsification of fractured lens tissue simultaneously and sequentially in order to effect emulsification of the lens tissue;

controlling a pulse duty cycle of said power source in response to the selected pulse amplitude, an off duty cycle being controlled to insure that dissipation before a subsequent pulse is activated; and

aspirating emulsified lens tissue and irrigation fluid from said lens capsule through said aspiration lumen.